

July 23, 2009

Ms. Carolyn d'Almeida  
United States Environmental Protection Agency  
75 Hawthorne Street, CMD-4-2  
San Francisco, CA 94105

Subject: Notification Regarding Self-implementing Onsite Cleanup and Disposal of Polychlorinated Biphenyl Remediation Waste in the Mezzanine Level of Building 84 in Investigation Area D1.3, Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California.

Dear Ms. d'Almeida:

Remedy Engineering, Inc. prepared this letter for Lennar Mare Island, LLC (LMI) in compliance with the Complaint/Consent Agreement and Final Order (CA/FO) between United States Environmental Protection Agency (USEPA) and the United States Department of the Navy (Navy), with the City of Vallejo and Lennar Mare Island (LMI) as intervenors (USEPA et al., 2001). The CA/FO sets forth the polychlorinated biphenyl (PCB) requirements that must be met to satisfy the Toxic Substances Control Act (TSCA) for the Eastern Early Transfer Parcel of Mare Island. This letter is submitted in compliance with Paragraph 12 of the CA/FO.

## Background

Based on review of historical records, building closure reports, databases of electrical equipment, and on visual site surveys, the Navy identified sites where PCB-containing equipment was located, where PCB spills were documented, or where PCB contamination was suspected because of building history or visible stains (Tetra Tech Environmental Management, Inc. [TtEMI], 1998).

One PCB site on the ground floor of Building 84 is listed in the Consent Agreement signed April 16, 2001 between LMI, the City of Vallejo, and the State of California Environmental Protection Agency, Department of Toxic Substances Control (LMI et al., 2001). This site is identified as Building 84 Assessment Location (AL) #01. Building 84 is located in the residential land use area within Investigation Area (IA) D1.3 (LMI, 2000). Figure 1 shows the location of Building 84 at Mare Island. This building is located west of Flagship Drive (formerly Suisun Avenue) and south of Sargo Avenue (formerly Mesa Road).

Building 84 was built in three phases between 1890 and 1909. From 1890 to 1954, the building was used as the marine prison. From 1954 to 1977, the building was used as the Navy publication and printing office. In the 1980s to the early 1990s, Building 84

was used for storage. Building 84 is currently vacant but is considered a high-occupancy site.

Sampling efforts at PCB Site Building 84 AL#01 began in 1995 as part of the Navy's PCB interim assessment program. Navy personnel from Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS) conducted interim PCB assessments and performed cleanup actions (i.e., washing, scabbling) in accordance with Technical Work Documents (TWDs), where necessary. Following the SSSPORTS interim PCB assessments and any necessary and related cleanup actions, TtEMI personnel collected confirmation samples either to confirm SSSPORTS findings that no cleanup was necessary or to determine the effectiveness of the SSSPORTS cleanup actions.

Since the end of the interim assessment program, a number of investigative and remedial activities have been conducted to address PCB contamination within and under PCB Site Building 84 AL#01. These activities are detailed below. Although PCBs in building materials (e.g., bulk floor material and light ballasts), floor surfaces, and soil under the original ground floor have been successfully remediated to concentrations below the cleanup goal of 1.0 milligram per kilogram (mg/kg)), indoor air concentrations of PCBs remain above both residential and commercial/industrial risk-based levels.

During one of the remedial action phases completed by CH2M HILL for Building 84 AL#01, an additional PCB Site was identified in the building; PCB Site Building 84-Mezzanine is a raised mezzanine measuring approximately 36 feet (ft) by 60 ft and is located in the northeast corner of Building 84. Sampling efforts were subsequently undertaken (in 2007 and additionally in early 2009) in the Building 84-Mezzanine in order to assess whether PCBs in the floor of the Building 84-Mezzanine area might be affecting the PCB concentrations in indoor air. Sample results to date (discussed in detail below) have indicated PCB concentrations in concrete chip samples are greater than the cleanup goal of 1.0 mg/kg.

The *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL, 2003a) describes the process for site closure in accordance with the CA/FO and the Toxic Substance Control Act (TSCA) regulations. The purpose of this letter is to provide the required Notification for site cleanup at PCB Site Building 84-Mezzanine in accordance with the provisions of TSCA, and as stated in 40 CFR 761.61(a)(3). Notification is required at least 30 days prior to the start of a cleanup action at a PCB site. The cleanup action for the PCBs in the Building 84-Mezzanine area will be in accordance with 40 CFR 761.61(a)—self-implementing, onsite cleanup, and disposal of PCB remediation waste.

This Notification includes the nature, location, and extent of PCB contamination in Building 84 and the Building 84-Mezzanine area; summary of previous sampling and cleanup actions in the main building area; cleanup plan to address remaining PCB concentrations in the Building 84-Mezzanine; and a certification that all sampling plans and sampling analysis procedures used to characterize this site are on file and available for USEPA inspection. The following sections provide the required information in each of these categories.

## **Nature of Contamination – 40 CFR 761.61(a)(3)(i)(A)**

The source of PCB contamination inside Building 84 is unknown. There are no recorded oil spills or transformers associated with the interior of this building. Sampling of the main building floor (concrete and asphalt media) was initiated because stains were evident during a Navy facility closure site inspection in 1995.

Historically, the maximum PCB concentrations detected in floor samples inside Building 84 (main floor) were 23.5 mg/kg in concrete samples and 11.3 micrograms per 100 square centimeters ( $\mu\text{g}/100\text{ cm}^2$ ) in wipe samples. During five remedial action phases from January 2004 to April 2007, all of the concrete and pavement sections of the building floor were removed. In addition, the soil beneath the pavement was also removed, varying from one to five feet below ground surface (ft-bgs).

In 2009, 20 concrete chip samples (plus two duplicates) were collected from the concrete floor of the Building 84-Mezzanine. PCB concentrations in these samples ranged from 5.8 to 22 mg/kg as Aroclor 1242 and from non-detect to 0.48 mg/kg as Aroclor 1260. Based on these analytical results, PCB contamination above allowable levels remains in the concrete floor of the Building 84-Mezzanine.

On four occasions from May 2004 to June 2007, air sampling was performed in Building 84, and each time the results have been consistently above the allowable levels (3.4 nanograms per cubic meter of air [ $\text{ng}/\text{m}^3$ ]) with a maximum concentration of 140  $\text{ng}/\text{m}^3$ . Each air sample was performed following a remedial action at Building 84 AL#01 to determine if the source of the indoor air contamination had been eliminated.

## **Summary of Previous Sampling – 40 CFR 761.61(a)(3)(i)(B)**

Table A-1 (included in Attachment A) provides a summary of the available sampling data collected from the ground floor/underlying soil at Building 84 AL#01 between 1995 and mid-2002. This table includes the sample numbers, matrix, sample date, and total PCB concentrations (laboratory reporting limit when PCBs were not detected). All samples were analyzed for PCBs using USEPA Methods SW8080, SW8081, or SW8082. Figure A-1 (included in Attachment A) shows the sample locations and cleanup action areas at Building 84 AL#01 between 1995 and mid-2002.

As part of the interim assessment, SSPTS personnel collected 42 stain-specific solid and wipe samples from the ground floor of Building 84 in February 1995 (SSPTS, 1997a). PCBs were not detected in 33 of these samples at laboratory reporting limits of 10  $\mu\text{g}/100\text{ cm}^2$  for wipe samples and 2 mg/kg for solid samples. The other nine samples had PCB concentrations ranging from 0.113 mg/kg to 23.5 mg/kg in asphalt/concrete media and 11.3  $\mu\text{g}/100\text{ cm}^2$  in a wipe sample (Table A-1).

SSPTS issued TWD 95-0070 (SSPTS, 1995) to wash a 31-inch by 33-inch stained area of the asphalt floor where the initial assessment sample result was 11.3  $\mu\text{g}/100\text{ cm}^2$ . SSPTS personnel collected two asphalt verification samples from this area on

January 7, 1997 following this cleanup action. These two samples had PCB concentrations of 5.7 mg/kg and 8.4 mg/kg (Table A-1).

SSPORTS issued TWD 97-1472 (SSPORTS, 1997b) to scabble six areas of the Building 84 ground floor where the PCB concentrations detected in the interim assessment samples exceeded the screening levels of 1 mg/kg and 10 µg/100 cm<sup>2</sup>. The interim assessment results for these six areas were: 1.11 mg/kg, 1.17 mg/kg, 1.37 mg/kg, 3.77 mg/kg, 11.3 µg/100 cm<sup>2</sup>, and 23.5 mg/kg (SSPORTS, 1997a). The work specified in this TWD was never performed. Instead, SSPORTS issued TWD 97-1472 Revision A (SSPORTS, 1998a), which was amended to specify for cleanup actions in only the two areas that had PCB concentrations exceeding 10 mg/kg and 10 µg/100 cm<sup>2</sup>. Therefore, four sample locations inside Building 84 with PCB concentrations greater than 1 mg/kg (1.11 mg/kg to 3.77 mg/kg) were not abated by the Navy.

TWD 97-1472 Revision A provided instruction to scabble a 10- by 10-foot section of the concrete floor to a depth of 0.25 inch where the initial assessment PCB concentration was 23.5 mg/kg and to remove a 10- by 10-foot section of the asphalt floor from the area initially abated by TWD 95-0070 (SSPORTS, 1998a). The results of samples collected after these cleanup actions are unknown. However, SSPORTS issued TWD 97-1472 Revision B (SSPORTS, 1998b) to remove additional concrete and asphalt from the same two floor areas as TWD 97-1472 Revision A. Following these cleanup actions, SSPORTS personnel collected nine verification samples, but these data were not located in the Navy files. SSPORTS Yard Route Slip does state, however, that "the final laboratory analyses were all non-detect" (SSPORTS, 1999).

TtEMI personnel collected three concrete confirmation samples from the floor of Building 84 on December 10, 1998. One concrete sample was collected from the exposed surface within the western abated areas where the floor had been removed to a depth of approximately 6 inches below the original surface (TtEMI, 1998). PCBs were detected in this sample at a concentration of 0.02J mg/kg (TtEMI, 1998). The other two confirmation samples were collected from the exposed surface within the eastern abated area where the floor had been removed to approximately four and six inches below the original surface (TtEMI, 1998). PCBs were not detected in these two samples at a concentration greater than the laboratory reporting limit (Table A-1).

In accordance with the *Draft Polychlorinated Biphenyl Work Plan* (CH2M HILL, 2002), CH2M HILL collected eight soil samples on June 25, 2002 at Building 84 AL#01 to replace the missing verification data following TWD 97-1472 Revision B. PCBs were not detected in these soil samples at a concentration greater than the laboratory reporting limit of 0.037 mg/kg (Table A-1).

CH2M HILL submitted a notification to USEPA in October 2003 proposing remedial activities at sample locations where PCBs were detected at concentrations greater than 1 mg/kg (CH2M HILL, 2003c). USEPA responded in November 2003 that it did not concur with the proposed remedial action and that further characterization was required (USEPA, 2003). CH2M HILL staff collected three additional samples (B84-CH100 through B84-CH102) from



unstained areas of the asphalt floor at PCB Site Building 84 AL#01 in December 2003. Total PCBs were detected in these samples at concentrations from 0.13 to 0.86 mg/kg (Figure A-2 and Table A-2, included in Attachment A). A revised notification was submitted to USEPA in July 2004 that included the additional characterization data (CH2M HILL, 2004a). USEPA concurred with the proposed remedial action in August 2004 (USEPA, 2004).

In January 2004, CH2M HILL removed portions of the ground floor and underlying soil in four areas, as described in the revised notification (CH2M HILL, 2004a). After the removal actions were complete, CH2M HILL collected four verification samples (B84-0801 through B84-0804). Total PCBs were detected in three samples, at concentrations from 0.17 to 1.2 mg/kg (Table A-2 and Figures A-4 through A-6, included in Attachment A). Sample location B84-0802 was over excavated by one foot because total PCBs were detected at a concentration of 1.2 mg/kg. Another verification sample was collected after the over excavation; PCBs were detected in this sample at a concentration of 0.11 mg/kg.

In March 2004, the DTSC directed that air samples be collected inside PCB Site Building 84 AL#01 because its future use was intended to be residential (condominiums) (CH2M HILL 2004b). In May 2004, CH2M HILL collected six, 24-hour air samples (Table A-3, included in Attachment A). One sample from each of the two wings of the building, one duplicate sample, and one tent sample (collected in a 10- by 10- by 8-foot enclosed space) were collected inside PCB Site Building 84 AL#01 (Figure A-3, included in Attachment A). In addition to these four samples, two samples were collected outside the building as background samples. One field blank sample was also collected. The samples were analyzed for individual congeners using modified USEPA Method 1668A. The detected congeners were sorted and grouped by homologue, and converted from mass (nanograms) to concentration ( $\text{ng}/\text{m}^3$ ) according to the volume of air sampled. The results of these air samples are presented in Table A-3. PCBs were not detected in the outdoor air samples (84-AIR-105 and 84-AIR-106) or the field blank (84-AIR-107) at concentrations above the reporting limit for each respective congener (Table A-3). Total PCB concentrations in the indoor air samples ranged from 21 to 69  $\text{ng}/\text{m}^3$ . These values are higher than the then USEPA Region 9 ambient air preliminary remediation goal (PRG) of 3.4  $\text{ng}/\text{m}^3$  (the current USEPA Region 9 residential Regional Screening Level [RSL] is 4.3  $\text{ng}/\text{m}^3$ ). The ambient air PRG is based on a residential exposure scenario and a target cancer risk level of  $1 \times 10^{-6}$ .

In June 2004, four wall wipe samples (B84-WP0200 through B84-WP0203) and three dust samples (B84-SS0204 through B84-SS0206) were collected to attempt to better understand the presence of PCBs in particulate matter inside PCB Site Building 84 AL#01. PCBs were not detected in the wall wipe samples (Table A-2), but were detected in the dust samples at concentrations from 0.86 to 5.8 mg/kg (Table A-2).

In May 2005, all the light ballasts were removed from Building 84 because they were considered possible sources of PCBs in air inside Building 84. In June 2005, two additional 24-hour indoor air samples were collected and analyzed for individual congeners, and the results converted from mass to concentration as previously described. Total PCBs were detected in these two indoor air samples at concentrations of 100 and 110  $\text{ng}/\text{m}^3$  (Table A-4, included in Attachment A) (CH2M HILL, 2007).

Because PCBs were detected in the three dust samples collected in June 2004, all horizontal surfaces in Building 84 were cleaned in August 2005 by vacuuming the surfaces and then wiping them down.

In September 2006, the asphalt, concrete, and brick floor in two large areas of PCB Site Building 84 AL#01 (referred to as Cells A and D) were removed along with approximately one foot of soil below the floor (Figures A-4 and A-6, included in Attachment A). The total excavation depth of the removal footprints was approximately 16 to 20 inches bgs. The two areas were subdivided for excavation confirmation sampling on 3- by 3-meter grids. Also in September 2006, 45 soil verification samples were collected from the removal area (Table A-2). Total PCBs were detected in 11 samples at concentrations from 0.070 to 3.0 mg/kg (Table A-2). Of these 11 samples, six samples contained concentrations of total PCBs greater than the USEPA Region 9 residential PRG for soil, 0.22 mg/kg (Table A-2). Sample locations B84AL01-CS0825, B84AL01-CS0827, B84AL01-CS0828, B84AL01-CS0842, B84AL01-CS0843, and B84AL01-CS0846 were over excavated to depths ranging from 3.5 to 6 feet bgs (Figures A-4 and A-6).

On October 31, 2006, six verification samples were collected from the removal area. Total PCBs were detected in two of the six samples, at concentrations from 0.11 to 1.9J mg/kg (Table A-2). Because total PCBs were detected at sample location B84AL01-CS0843 at a concentration greater than 0.22 mg/kg, this sample location was over excavated to a depth of 5.0 feet bgs (Table A-2). On November 21, 2006, another verification sample was collected from former sample location B84AL01-CS0843. Total PCBs were detected in this verification sample at a concentration of 0.13 mg/kg (Table A-2 and Figure A-4, included in Attachment A).

In December 2006, after excavation activities were complete, four indoor air samples were collected from PCB Site Building 84 AL#01. Concentrations of total PCBs in these samples ranged from 91 to 140 ng/m<sup>3</sup> (Table A-5 and Figure A-3, included in Attachment A). These detected concentrations, which were similar to those detected in the June 2005 samples, exceeded the ambient air PRG of 3.4 ng/m<sup>3</sup>. These results suggest that cleaning the horizontal surfaces inside the building and removing large portions of asphalt, concrete, and brick flooring in two locations did not reduce indoor air levels of PCBs (CH2M HILL, 2007).

In April 2007, the asphalt, concrete, and brick floors in the remaining areas of PCB Site Building 84 AL#01 (referred to as Cells B, C, E, and F) were removed along with approximately 1 foot of soil below the floor (Figures A-4 and A-5, included in Attachment A). After these removal actions were complete, 78 verification samples were collected (Table A-2). Total PCBs were detected in one of the 78 samples (B84AL01-CS0874) at a concentration of 0.14 mg/kg. The remaining verification samples did not contain PCBs at concentrations above the reporting limit.

In June 2007, prior to collecting indoor air samples, the entryways to Building 84 were opened and the building was aired out for 24 hours. After 24 hours, the entryways and windows were sealed and the building sat for 72 hours. After the 72-hour wait, four, 24-hour indoor air samples were collected in June 2007. Total PCB concentrations in these samples

ranged from 120 to 130 ng/m<sup>3</sup> (Table A-6 and Figure A-3). These detected concentrations, which are similar to those detected in the December 2006 samples, exceeded the ambient air PRG of 3.4 ng/m<sup>3</sup>. These results demonstrate that removing the entire ground floor and underlying soil, in addition to the previous cleanup activities, did not reduce indoor air levels of PCBs.

In March 2007, CH2M HILL collected four concrete chip samples (B84MEZZCH0101-C0 through B84MEZZCH0104-C0) from a stained area on the Building 84-Mezzanine floor. Total PCB concentrations in these samples ranged from 4.0 mg/kg to 4.3 mg/kg. Locations of these samples are shown on Figure 2.

In February 2009, Remedy Engineering, Inc. collected 20 additional concrete chip samples (in addition to two duplicate samples) from the floor of the mezzanine area (Figure 2). The samples were collected on a 10 foot by 10 foot grid. The results of the Building 84-Mezzanine concrete chip sampling are provided in Table 1. As shown on the table, PCB concentrations in these samples ranged from 5.8 to 22 mg/kg as Aroclor 1242 and from non-detect to 0.48 mg/kg as Aroclor 1260. No other Aroclors were detected above laboratory detection limits. Copies of the laboratory data sheets for this sampling event are included in Attachment B.

## **Location and Extent of Contaminated Area – 40 CFR 761.61(a)(3)(i)(C)**

PCB concentrations in the ground floor (following removal of flooring material and underlying soil) of Building 84 are below the cleanup level of 1 mg/kg. However, analytical results from the concrete chip samples collected from PCB Site Building 84-Mezzanine show PCB concentrations with a maximum of 22 mg/kg.

## **Cleanup Plan – 40 CFR 761.61(a)(3)(i)(D)**

The entire floor of the Building 84-Mezzanine area (approximately 36 feet by 60 feet, Figure 2) will be scarified to a depth of 0.25 inches and 9-point composite concrete chip samples will be collected on an approximate 1.5 meter grid as shown on Figure 3 to determine if remediation goals for PCBs have been met. Approximately 3.4 tons of concrete will be removed from PCB Site Building 84-Mezzanine area. This additional cleanup action for the Building 84 mezzanine site will occur during September 2009.

This cleanup action will be performed in accordance with the *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL, 2003a) and 40 CFR 761. Sample analysis will be in accordance with the *Quality Assurance Project Plan* (CH2M HILL, 2001) using USEPA Method SW8082. Health and safety will be in accordance with the *Remedy Engineering Health and Safety Plan for Environmental Activities Lennar Mare Island, Vallejo, California* (Trihydro, 2009). Standard operating procedures (SOPs) for the field work and issues

regarding site security, site access, permits and notifications, site restoration, and site demobilization were addressed in the *Draft Polychlorinated Biphenyl Work Plan* (CH2M HILL,2002).

PCB waste management will be performed in accordance with Appendix B8 of the *Draft Polychlorinated Biphenyl Work Plan* (CH2M HILL, 2002). It is assumed based on the initial site characterization results that PCB-containing wastes generated from this cleanup action will be disposed of off-site at a Class II landfill.

In accordance with 40 CFR 761.61(a)(4), the goal for this self-implementing cleanup is to achieve a remaining PCB concentration of less than or equal to 1 mg/kg for this high-occupancy area, as determined by the verification sampling. Abatement will continue until the verification sampling results indicate that this cleanup goal has been met or it is assessed that structural integrity of the building has been impacted.

## **Certification – 40 CFR 761.61(a)(3)(i)(E)**

Project files for Building 84 AL#01 and PCB Site Building 84-Mezzanine are located in both the Remedy Engineering, Inc. office in Redding, California (1567 Yuba Street) and the CH2M HILL Office in Oakland, California (155 Grand Avenue, Suite 1000). Attachment C contains the written certification, signed by LMI (the owner of the property where the cleanup site is located) and Remedy Engineering, Inc. (the party conducting the cleanup), documenting that all sampling plans and procedures used to assess or characterize the PCB contamination at the cleanup site are on file at the above-mentioned locations and are available for USEPA inspection.

## **Conclusions**

The floor of the Building 84-Mezzanine contains PCB concentrations above 1 mg/kg. The top 0.25- inches of the entire floor will be scarified and removed. Verification sample results will determine whether the cleanup goal of less than or equal to 1 mg/kg has been met or it is assessed that structural integrity of the building has been impacted.

Please submit your approval of the self-implementing cleanup option to me within 30 calendar days of receiving this Notification at the above address or via email at [tcorontzos@remedyengineering.com](mailto:tcorontzos@remedyengineering.com). If you have any questions or concerns regarding this Notification for Building 84-Mezzanine, please contact me at (530) 241-7658.

## **References**

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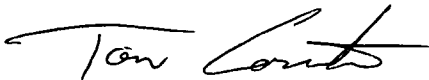
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Sincerely,

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## TABLES

Table 1. Analytical Results for February 2009 Concrete Chip Sampling Project, PCB Site Building 84 Mezzanine, Lennar Mare Island, Vallejo, California

Sample Name	Sample Date	Sample Matrix	Aroclor 1242 (mg/kg)	Aroclor 1260 (mg/kg)	All Other Aroclors (mg/kg)
B84MEZZRE0101	2/5/2009	Concrete Chip	12	0.37	ND
B84MEZZRE0102	2/5/2009	Concrete Chip	16	0.4	ND
B84MEZZRE0103	2/5/2009	Concrete Chip	22	0.48	ND
B84MEZZRE0104	2/5/2009	Concrete Chip	8.2	0.42	ND
B84MEZZRE0105	2/5/2009	Concrete Chip	11	0.46	ND
B84MEZZRE0106	2/5/2009	Concrete Chip	6.6	0.2	ND
B84MEZZRE0107	2/5/2009	Concrete Chip	5.9	ND (0.17)	ND
B84MEZZRE0108	2/5/2009	Concrete Chip	9.7	0.31	ND
B84MEZZRE0108D	2/5/2009	Concrete Chip	5.8	0.19	ND
B84MEZZRE0109	2/5/2009	Concrete Chip	8	0.26	ND
B84MEZZRE0110	2/5/2009	Concrete Chip	8.3	ND (0.17)	ND
B84MEZZRE0111	2/5/2009	Concrete Chip	9.6	0.29	ND
B84MEZZRE0112	2/5/2009	Concrete Chip	8.4	0.18	ND
B84MEZZRE0113	2/5/2009	Concrete Chip	7.7	0.26	ND
B84MEZZRE0114	2/5/2009	Concrete Chip	9.2	0.2	ND
B84MEZZRE0115	2/5/2009	Concrete Chip	11	0.26	ND
B84MEZZRE0116	2/5/2009	Concrete Chip	9.3	ND (0.17)	ND
B84MEZZRE0117	2/5/2009	Concrete Chip	12	0.19	ND
B84MEZZRE0118	2/5/2009	Concrete Chip	10	0.18	ND
B84MEZZRE0119	2/5/2009	Concrete Chip	8.3	ND (0.17)	ND
B84MEZZRE0119D	2/5/2009	Concrete Chip	11	0.21	ND
B84MEZZRE0120	2/5/2009	Concrete Chip	5.8	0.2	ND

Notes:

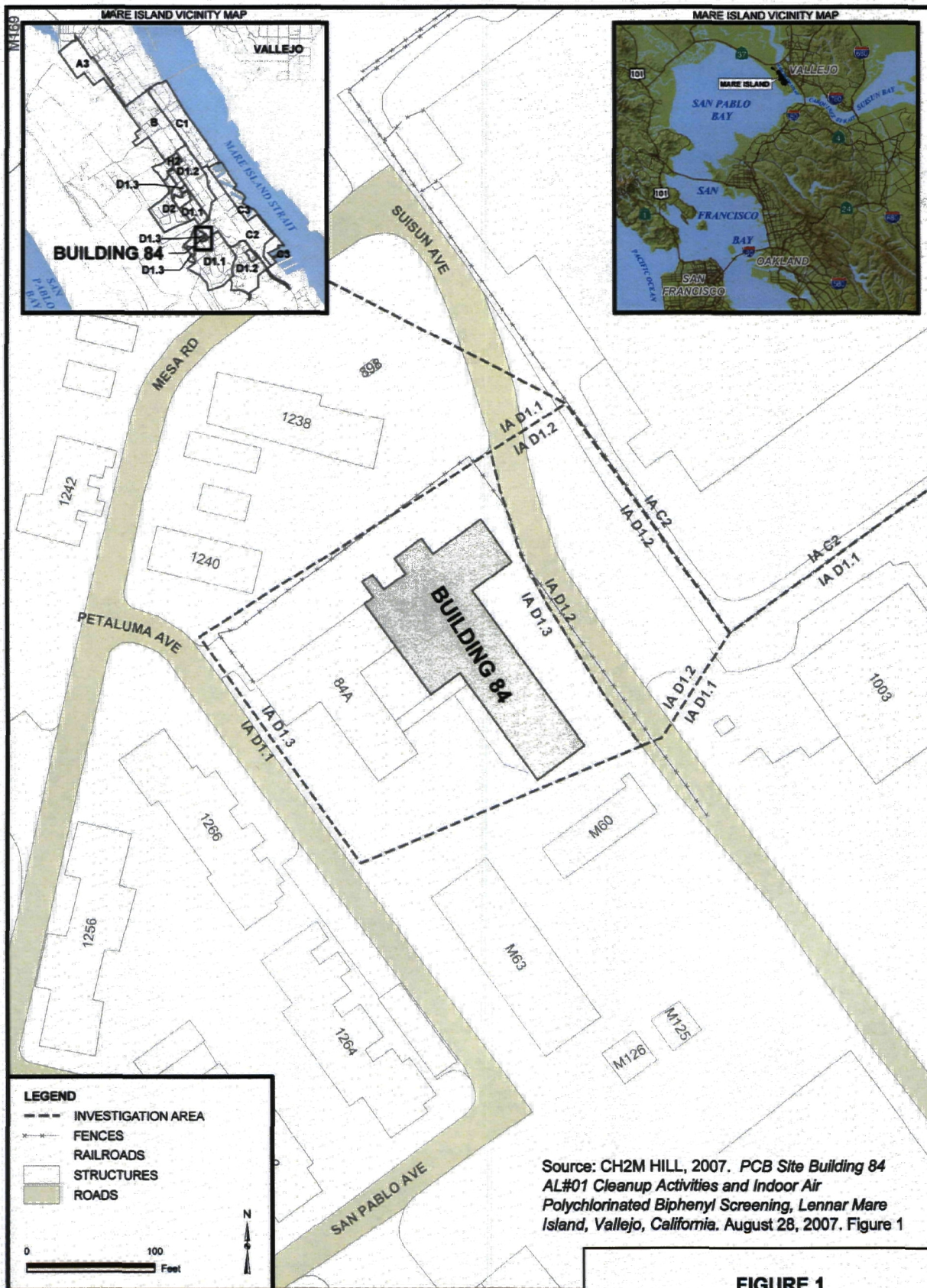
All samples analyzed for PCB Aroclors using EPA Method 8082

D - field duplicate sample

ND - Not Detected with the laboratory detection limit in parenthesis, where applicable

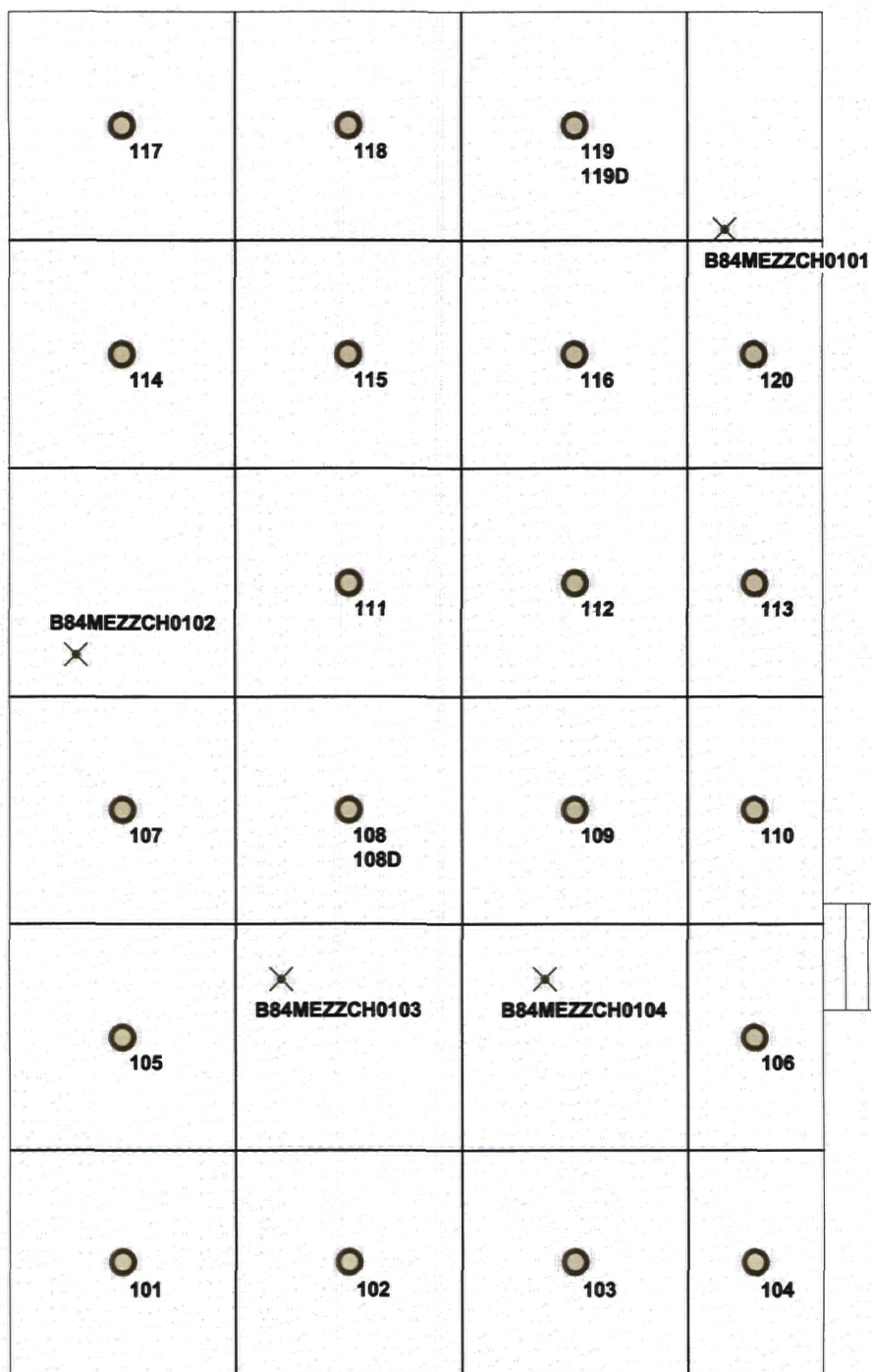
mg/kg - milligrams per kilogram

## FIGURES



**FIGURE 1**  
**LOCATION OF BUILDING 84**  
 Lennar Mare Island, Vallejo, California





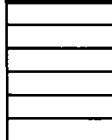
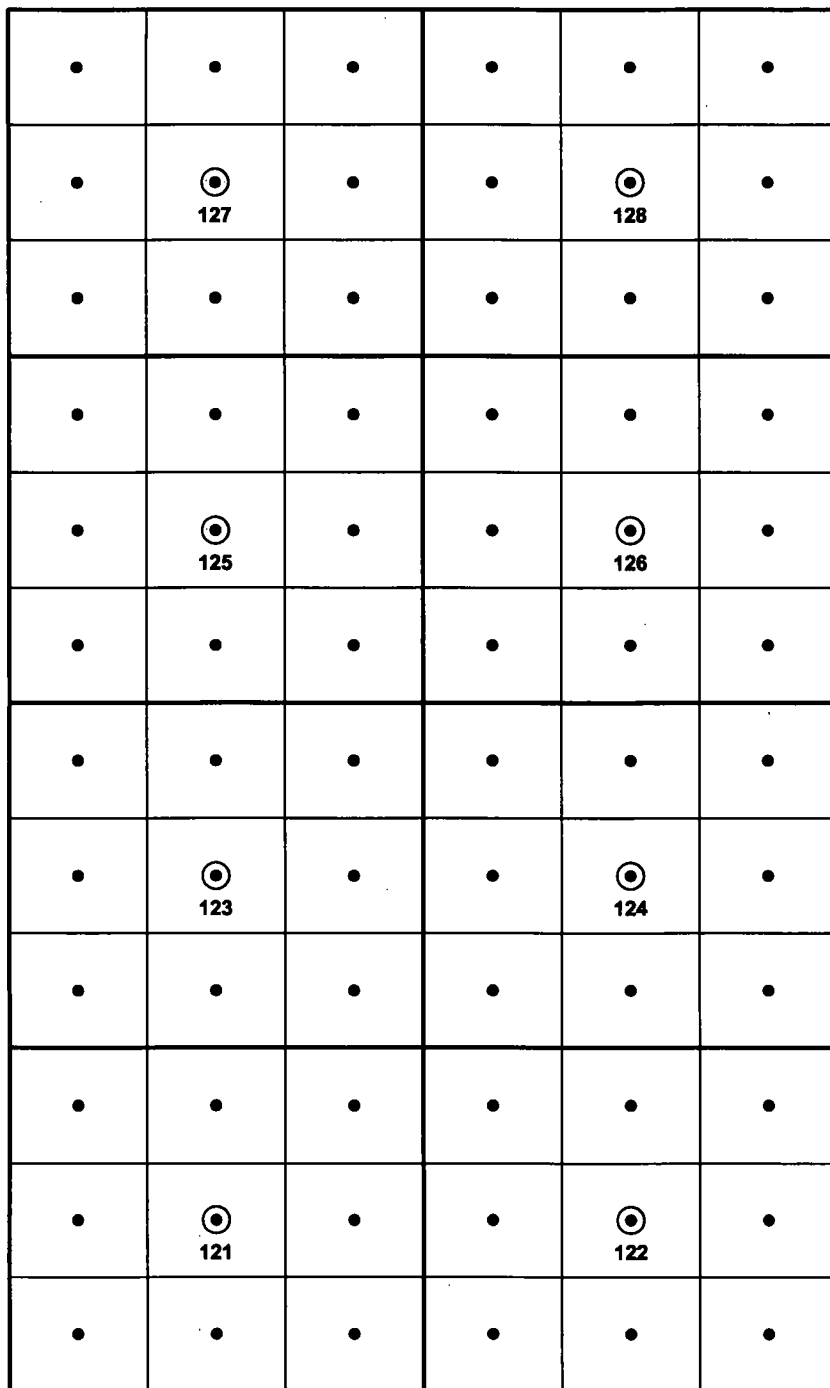
**LEGEND**

- Remedy Sample Location (February 2009)
- CH2M Hill Sample Location (March 2007)

Note: Remedy sample names are prefixed by B84MEZZRE  
'D' indicates a duplicate sample was collected at this location



**FIGURE 2**  
**LOCATION OF FEBRUARY 5, 2009**  
**CONCRETE CHIP SAMPLES,**  
**BUILDING 84 MEZZANINE**  
Lennar Mare Island, Vallejo, California



#### LEGEND

- Individual Sample Location to be Combined into Composite Sample
- ⊙ Verification Composite Sample Name
- Composite Sampling Area

Notes: Individual sample areas measure approximately 1.5 by 1.5 meters  
Sample names will be prefixed by B84MEZZRE

**FIGURE 3**  
**LOCATION OF COMPOSITE**  
**VERIFICATION SAMPLES,**  
**BUILDING 84 MEZZANINE**  
Lennar Mare Island, Vallejo, California

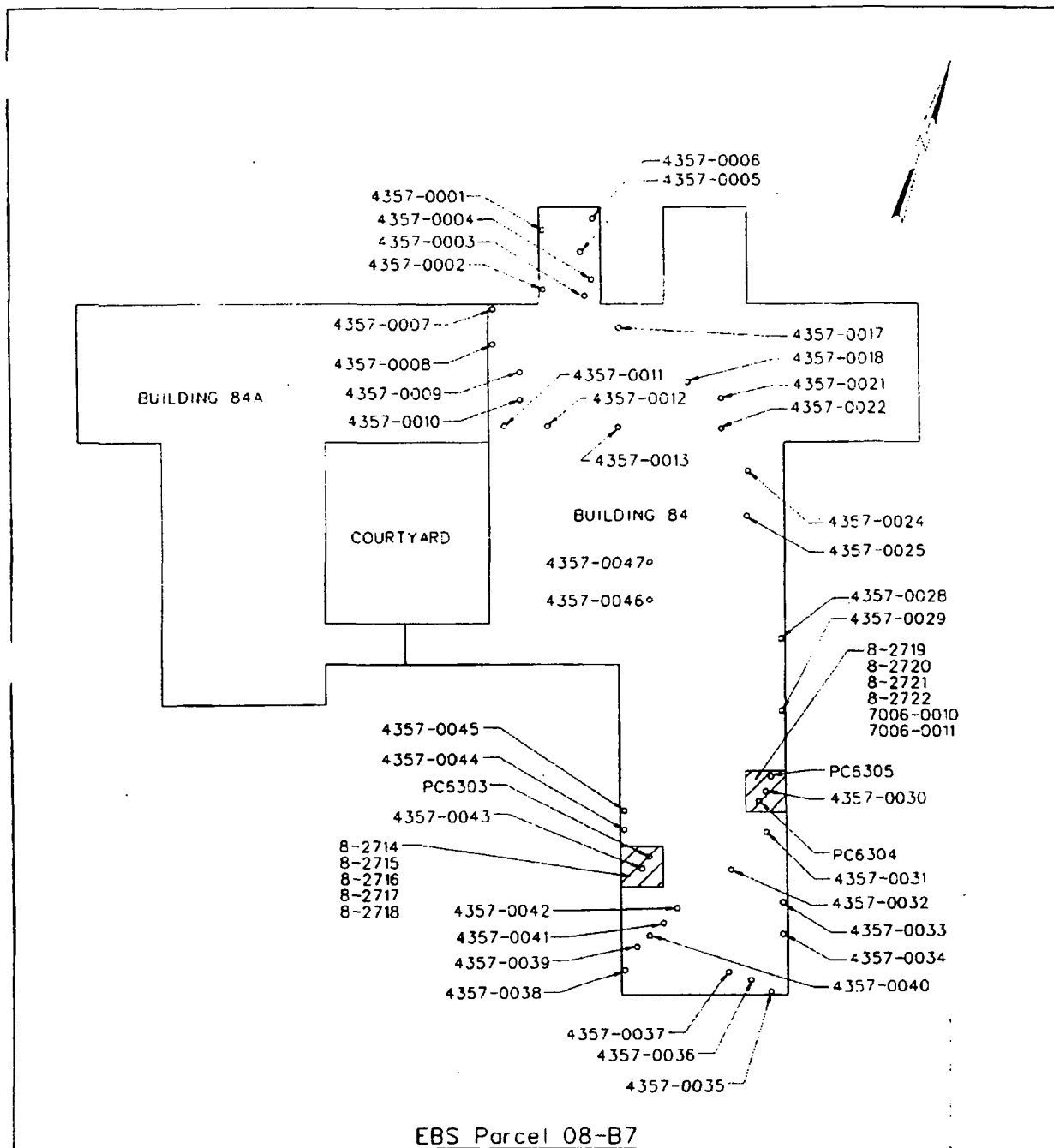
## **ATTACHMENT A**

### **TABLES AND FIGURES FROM PREVIOUS INVESTIGATIONS**

Note: Tables and Figures included in this Attachment are taken from the following reports. They are presented as originally prepared; however a revised table/figure number has been added for clarity.

CH2M HILL, 2003c. Notification Regarding Self-implementing Onsite Cleanup and Disposal of Polychlorinated Biphenyl Remediation Waste Inside Building 84 in Investigation Area D1, Eastern Early Transfer Parcel, Mare Island, Vallejo, California. October 22, 2003.

CH2M HILL, 2007. PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening, Lennar Mare Island, Vallejo, California. August 28, 2007.



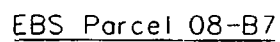
PREVIOUS CLEANUP ACTION AREAS

**Figure A-1**

FIGURE 3  
BUILDING 84 AL #01  
PREVIOUS SAMPLE LOCATIONS  
LENNAR MARE ISLAND, Vallejo, California

**CH2MHILL**

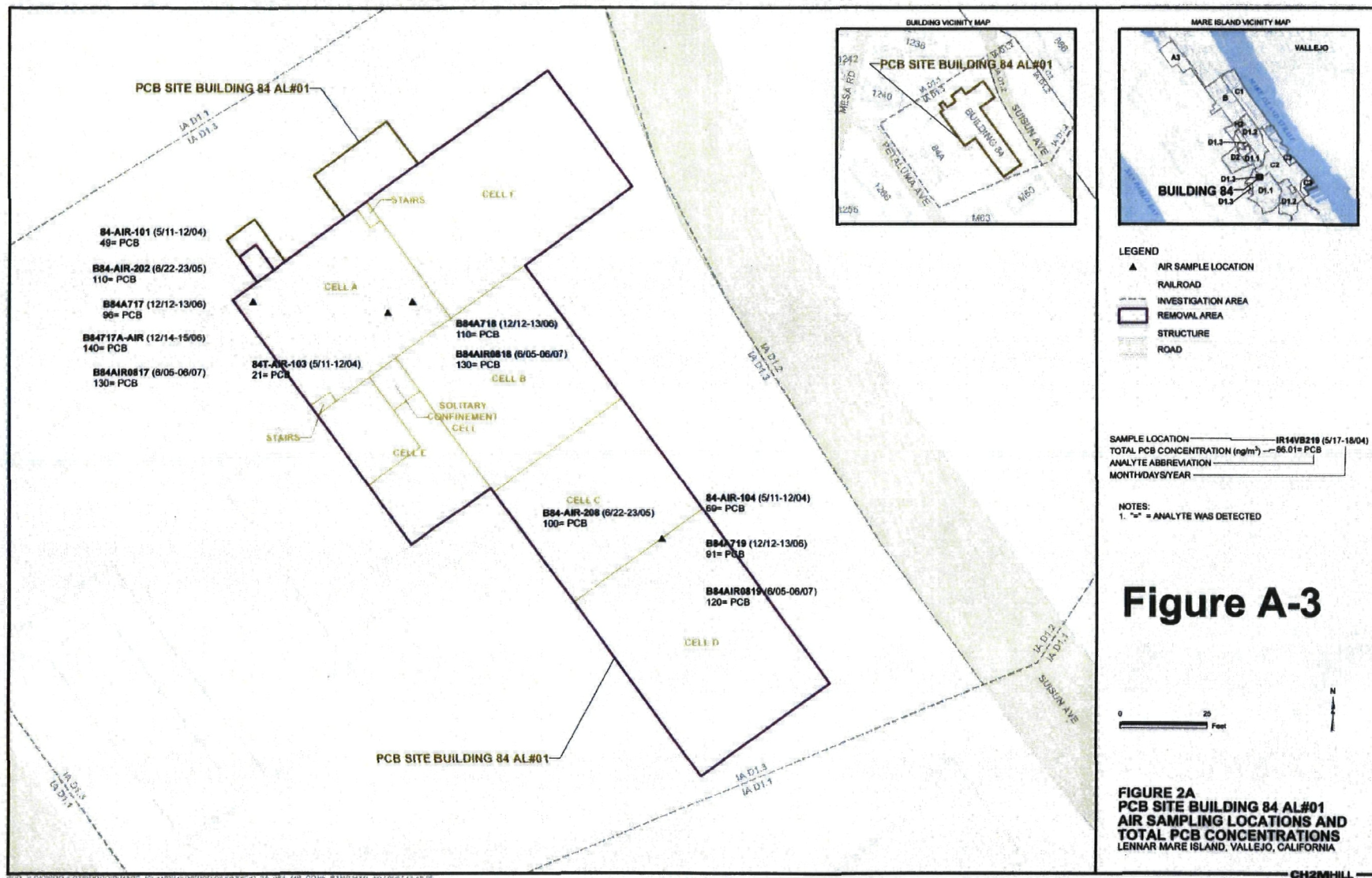


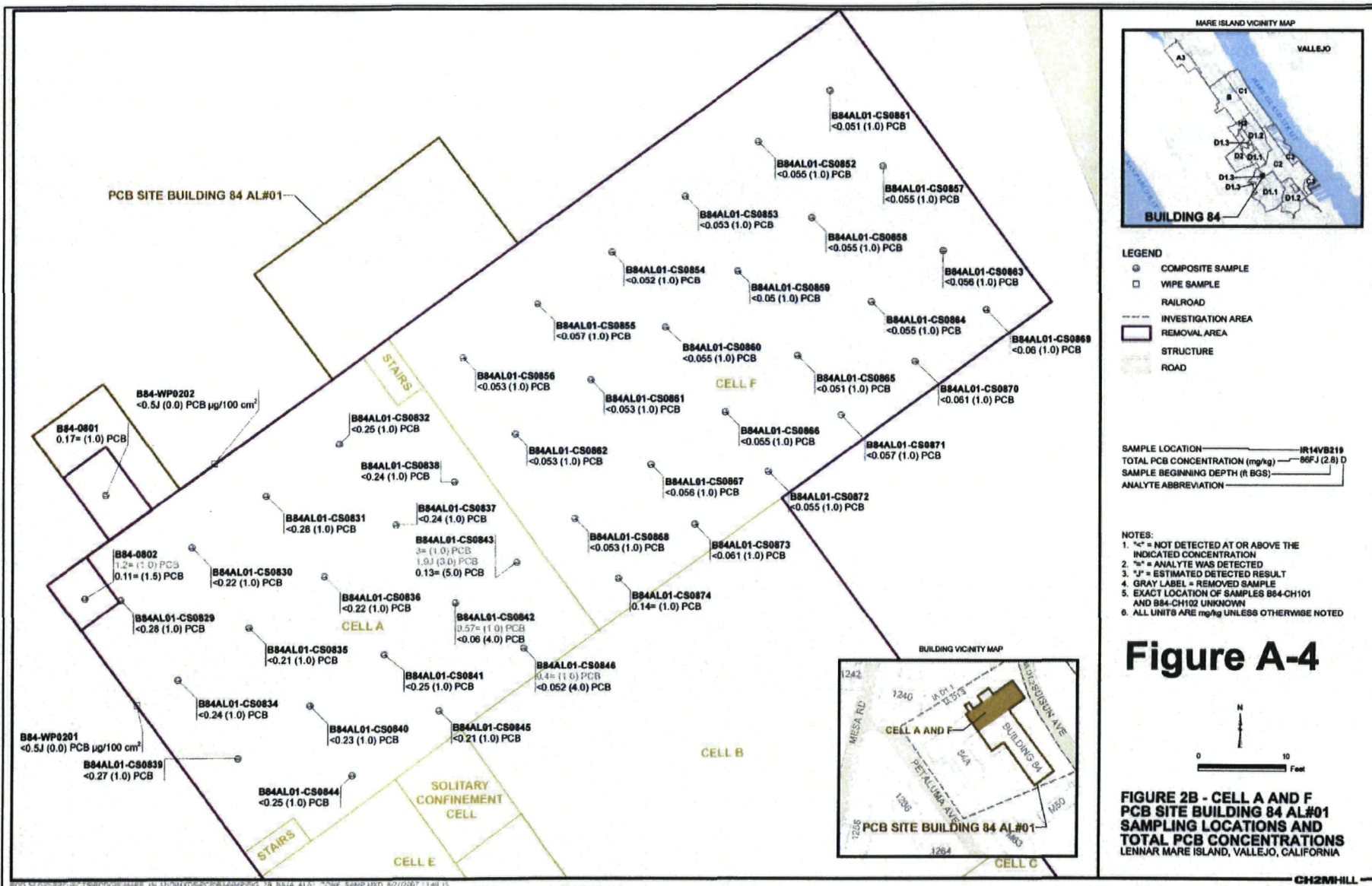


ND- NON DETECT

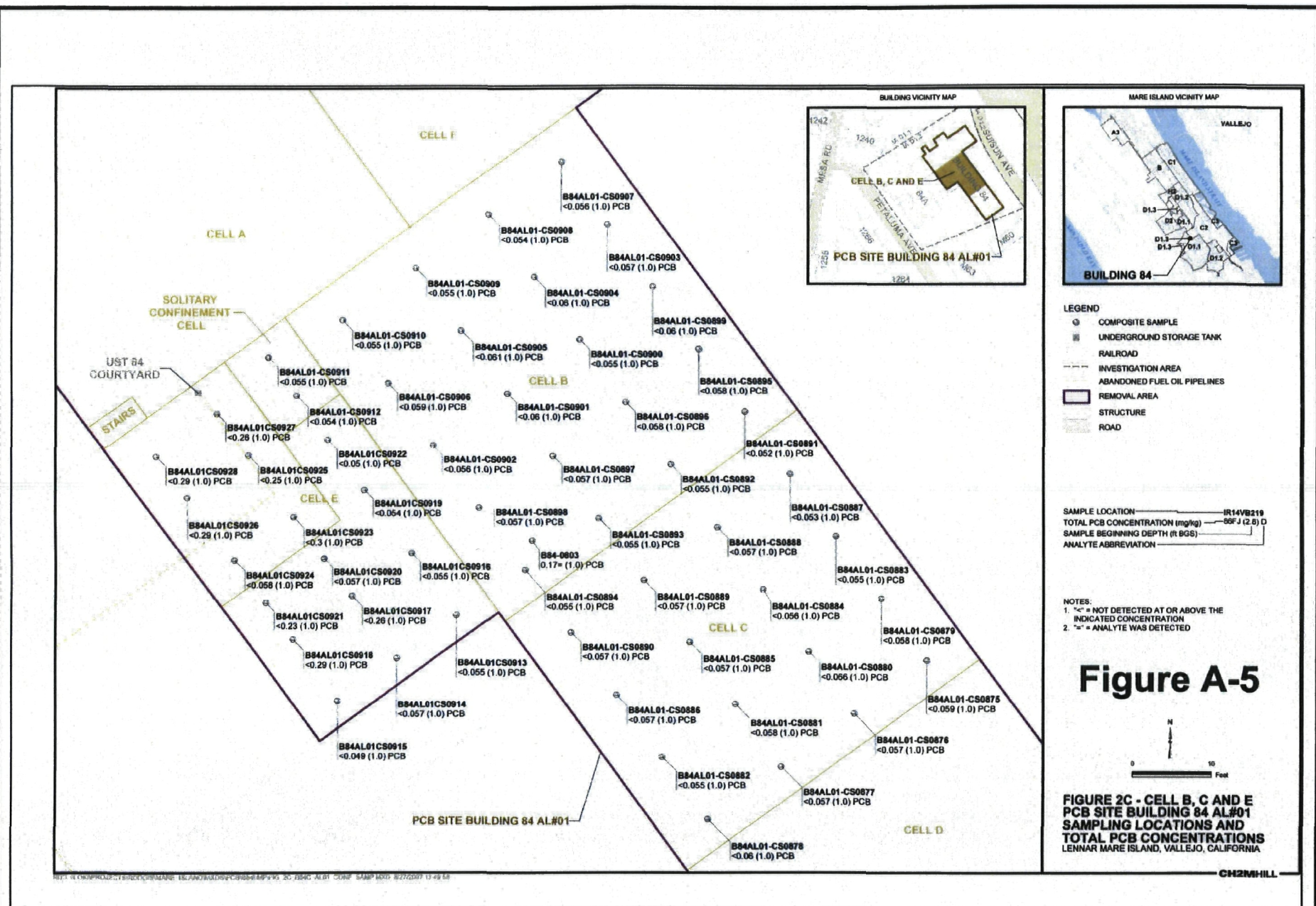
FIGURE 1  
BUILDING 84 AL#01  
REMAINING PCB CONCENTRATIONS  
LENNAR MARE ISLAND, Vallejo, California

**CH2MHILL**













**TABLE 1**  
**Sample Results for Building 84 AL#01**  
**PCB Sites, Lennar Mare Island, Vallejo, California**

PCB Site Name	Site Description	Sample Number	Sample Matrix	Sample Date	PCB Concentration (mg/kg)	Comments
Building 84 AL#01	Floor of the building	4357-0001	Asphalt	2/22/95	0.653	
		4357-0002	Asphalt	2/22/95	1.11	
		4357-0007	Asphalt	2/22/95	1.37	
		4357-0008	Asphalt	2/22/95	0.716	
		4357-0030	Concrete	2/22/95	11.3 µg/100 cm <sup>2</sup>	Removed
		4357-0037	Asphalt	2/22/95	3.77	
		4357-0043	Concrete	2/22/95	23.5	Removed
		4357-0046	Asphalt	2/22/95	1.17	
		4357-0047	Asphalt	2/22/95	0.113	
		7006-0010	Concrete	1/7/97	8.4	Removed
		7006-0011	Concrete	1/7/97	5.7	Removed
		PC6303	Concrete	12/10/98	0.02 J	
		PC6304	Concrete	12/10/98	ND (< 0.036)	
		PC6305	Concrete	12/10/98	ND (< 0.036)	
		8-2714-CH2M	Soil	6/25/02	ND (< 0.04)	
		8-2715-CH2M	Soil	6/25/02	ND (< 0.04)	
		8-2716-CH2M	Soil	6/25/02	ND (< 0.04)	
		8-2717-CH2M	Soil	6/25/02	ND (< 0.04)	
		8-2718-CH2M	Soil	6/25/02	ND (< 0.04)	
		8-2719-CH2M	Soil	6/25/02	ND (< 0.04)	
		8-2720-CH2M	Soil	6/25/02	ND (< 0.04)	
		8-2721-CH2M	Soil	6/25/02	ND (< 0.04)	

**Notes:**

Sample numbers beginning with PC were collected by TIEML. Sample numbers beginning with B were collected by CH2M HILL. All other samples were collected by SSPORTS.

The following wipe and/or solid samples were collected from the floor of Building 84 on 2/22/95 and had PCB results <10 µg/100 cm<sup>2</sup> or <2 mg/kg: 4357-0003 through 0006 (asphalt); 4357-0009 through 0010 (painted asphalt); 4357-0011 (soil); 4357-0012 through 0013 (painted asphalt); 4357-0017 (asphalt); 4357-0018 through 0020 (painted asphalt); 4357-0021 through 0023 (asphalt); 4357-0024 through 0025 (painted asphalt); 4357-0028 (asphalt); 4357-0029 (painted concrete); 4357-0031 through 0036 (painted concrete); 4357-0038 through 0042 (painted concrete); 4357-0044 (painted concrete); 4357-0045 (painted asphalt).

AL Assessment Location.  
J estimated concentration.  
mg/kg milligrams per kilogram.  
ND not detected (laboratory reporting limit in parentheses).  
PCB polychlorinated biphenyl.

**Table A-1**

TABLE 1

Sample Results for PCB Site Building 84 AL#01

*PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening,  
Lennar Mare Island, Vallejo, California*

Sample Number	Sample Date	Sample Depth (feet bgs)	Sample Matrix	Total PCB Concentration <sup>a</sup>
B84AL1GB0162	06/25/2002	1.5	Soil	<0.060 mg/kg
B84AL1GB0163	06/25/2002	1.5	Soil	<0.056 mg/kg
B84AL1GB0164	06/25/2002	1.5	Soil	<0.057 mg/kg
B84AL1GB0165	06/25/2002	1.5	Soil	<0.056 mg/kg
B84AL1GB0166	06/25/2002	1.5	Soil	<0.057 mg/kg
B84AL1GB0167	06/25/2002	1.5	Soil	<0.055 mg/kg
B84AL1GB0168	06/25/2002	1.5	Soil	<0.056 mg/kg
B84AL1GB0169	06/25/2002	1.5	Soil	<0.059 mg/kg
B84-CH100	12/03/2003	0	Asphalt	0.86 mg/kg
B84-CH101	12/03/2003	0	Asphalt	0.13 mg/kg
B84-CH102	12/03/2003	0	Asphalt	0.75 mg/kg
B84-0801	01/08/2004	1.0	Soil	0.17 mg/kg
B84-0802	01/08/2004	1.0	Soil	1.2 mg/kg
B84-0803	01/08/2004	1.0	Soil	0.17 mg/kg
B84-0804	01/08/2004	1.0	Soil	<0.054 mg/kg
B84-0802	01/23/2004	2.0	Soil	0.11 mg/kg
B84-WP0200	06/02/2004	0	Wipe	<0.5J µg/wipe
B84-WP0201	06/02/2004	0	Wipe	<0.5J µg/wipe
B84-WP0202	06/02/2004	0	Wipe	<0.5J µg/wipe
B84-WP0203	06/02/2004	0	Wipe	<0.5J µg/wipe
B84-SS0204	06/03/2004	0	Dust	2.2 mg/kg
B84-SS0205	06/10/2004	0	Dust	5.8 mg/kg
B84-SS0206	06/10/2004	0	Dust	0.86 mg/kg
B84AL01-CS0801	09/26/2006	1.0	Soil	<0.26 mg/kg
B84AL01-CS0802	09/26/2006	1.0	Soil	<0.28 mg/kg
B84AL01-CS0803	09/26/2006	1.0	Soil	<0.057 mg/kg
B84AL01-CS0804	09/26/2006	1.0	Soil	<0.23 mg/kg
B84AL01-CS0805	09/26/2006	1.0	Soil	<0.25 mg/kg
B84AL01-CS0806	09/26/2006	1.0	Soil	<0.28 mg/kg
B84AL01-CS0807	09/26/2006	1.0	Soil	<0.28 mg/kg
B84AL01-CS0808	09/26/2006	1.0	Soil	<0.25 mg/kg
B84AL01-CS0809	09/26/2006	1.0	Soil	<0.25 mg/kg
B84AL01-CS0810	09/26/2006	1.0	Soil	<0.26 mg/kg

Table A-2

TABLE 1

Sample Results for PCB Site Building 84 AL#01

*PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening,  
Lennar Mare Island, Vallejo, California*

Sample Number	Sample Date	Sample Depth (feet bgs)	Sample Matrix	Total PCB Concentration <sup>a</sup>
B84AL01-CS0811	09/26/2006	1.0	Soil	<0.24 mg/kg
B84AL01-CS0812	09/26/2006	1.0	Soil	<0.26 mg/kg
B84AL01-CS0813	09/26/2006	1.0	Soil	<0.29 mg/kg
B84AL01-CS0814	09/26/2006	1.0	Soil	<0.29 mg/kg
B84AL01-CS0815	09/26/2006	1.0	Soil	<0.29 mg/kg
B84AL01-CS0816	09/26/2006	1.0	Soil	<0.26 mg/kg
B84AL01-CS0817	09/26/2006	1.0	Soil	0.10 mg/kg
B84AL01-CS0818	09/26/2006	1.0	Soil	<0.25 mg/kg
B84AL01-CS0819	09/26/2006	1.0	Soil	0.070 mg/kg
B84AL01-CS0820	09/26/2006	1.0	Soil	0.097 mg/kg
B84AL01-CS0821	09/26/2006	1.5	Soil	<0.27 mg/kg
B84AL01-CS0822	09/26/2006	1.0	Soil	<0.055 mg/kg
B84AL01-CS0823	09/26/2006	1.0	Soil	<0.32 mg/kg
B84AL01-CS0824	09/26/2006	1.0	Soil	0.13 mg/kg
B84AL01-CS0825	09/26/2006	1.5	Soil	1.5 mg/kg
B84AL01-CS0826	09/26/2006	1.0	Soil	0.080 mg/kg
B84AL01-CS0827	09/26/2006	1.0	Soil	0.30 mg/kg
B84AL01-CS0828	09/26/2006	1.0	Soil	0.61 mg/kg
B84AL01-CS0829	09/28/2006	1.0	Soil	<0.28 mg/kg
B84AL01-CS0830	09/28/2006	1.0	Soil	<0.22 mg/kg
B84AL01-CS0831	09/28/2006	1.0	Soil	<0.28 mg/kg
B84AL01-CS0832	09/28/2006	1.0	Soil	<0.25 mg/kg
B84AL01-CS0834	09/28/2006	1.0	Soil	<0.24 mg/kg
B84AL01-CS0835	09/28/2006	1.0	Soil	<0.21 mg/kg
B84AL01-CS0836	09/28/2006	1.0	Soil	<0.22 mg/kg
B84AL01-CS0837	09/28/2006	1.0	Soil	<0.24 mg/kg
B84AL01-CS0838	09/28/2006	1.0	Soil	<0.24 mg/kg
B84AL01-CS0839	09/28/2006	1.0	Soil	<0.27 mg/kg
B84AL01-CS0840	09/28/2006	1.0	Soil	<0.23 mg/kg
B84AL01-CS0841	09/28/2006	1.0	Soil	<0.25 mg/kg
B84AL01-CS0842	09/28/2006	1.0	Soil	0.57 mg/kg
B84AL01-CS0843	09/28/2006	1.0	Soil	3.0 mg/kg
B84AL01-CS0844	09/28/2006	1.0	Soil	<0.25 mg/kg
B84AL01-CS0845	09/28/2006	1.0	Soil	<0.21 mg/kg

Table A-2



TABLE 1

Sample Results for PCB Site Building 84 AL#01

*PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening,  
Lennar Mare Island, Vallejo, California*

Sample Number	Sample Date	Sample Depth (feet bgs)	Sample Matrix	Total PCB Concentration <sup>a</sup>
B84AL01-CS0846	09/28/2006	1.0	Soil	0.40 mg/kg
B84AL01-CS0825	10/31/2006	5.5	Soil	<0.055 mg/kg
B84AL01-CS0827	10/31/2006	4.0	Soil	<0.054 mg/kg
B84AL01-CS0828	10/31/2006	4.0	Soil	0.11 mg/kg
B84AL01-CS0842	10/31/2006	4.0	Soil	<0.060 mg/kg
B84AL01-CS0843	10/31/2006	3.0	Soil	1.9J mg/kg
B84AL01-CS0846	10/31/2006	4.0	Soil	<0.052 mg/kg
B84AL01-CS0843	11/21/2006	5.0	Soil	0.13 mg/kg
B84AL01-CS0851	05/01/2007	1.0	Soil	<0.051 mg/kg
B84AL01-CS0852	05/01/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0853	05/01/2007	1.0	Soil	<0.053 mg/kg
B84AL01-CS0854	05/01/2007	1.0	Soil	<0.053 mg/kg
B84AL01-CS0855	05/01/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0856	05/01/2007	1.0	Soil	<0.053 mg/kg
B84AL01-CS0857	05/01/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0858	05/01/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0859	05/01/2007	1.0	Soil	<0.050 mg/kg
B84AL01-CS0860	05/01/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0861	05/01/2007	1.0	Soil	<0.053 mg/kg
B84AL01-CS0862	05/01/2007	1.0	Soil	<0.053 mg/kg
B84AL01-CS0863	05/01/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0864	05/01/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0865	05/01/2007	1.0	Soil	<0.051 mg/kg
B84AL01-CS0866	05/01/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0867	05/01/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0868	05/01/2007	1.0	Soil	<0.053 mg/kg
B84AL01-CS0869	05/01/2007	1.0	Soil	<0.060 mg/kg
B84AL01-CS0870	05/01/2007	1.0	Soil	<0.061 mg/kg
B84AL01-CS0871	05/01/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0872	05/01/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0873	05/01/2007	1.0	Soil	<0.061 mg/kg
B84AL01-CS0874	05/01/2007	1.0	Soil	0.14 mg/kg
B84AL01-CS0875	05/03/2007	1.0	Soil	<0.059 mg/kg
B84AL01-CS0876	05/03/2007	1.0	Soil	<0.057 mg/kg

Table A-2

TABLE 1

Sample Results for PCB Site Building 84 AL#01

PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening,  
Lennar Mare Island, Vallejo, California

Sample Number	Sample Date	Sample Depth (feet bgs)	Sample Matrix	Total PCB Concentration <sup>a</sup>
B84AL01-CS0877	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0878	05/03/2007	1.0	Soil	<0.060 mg/kg
B84AL01-CS0879	05/03/2007	1.0	Soil	<0.058 mg/kg
B84AL01-CS0880	05/03/2007	1.0	Soil	<0.066 mg/kg
B84AL01-CS0881	05/03/2007	1.0	Soil	<0.058 mg/kg
B84AL01-CS0882	05/03/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0883	05/03/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0884	05/03/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0885	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0886	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0887	05/03/2007	1.0	Soil	<0.053 mg/kg
B84AL01-CS0888	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0889	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0890	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0891	05/03/2007	1.0	Soil	<0.052 mg/kg
B84AL01-CS0892	05/03/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0893	05/03/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0894	05/03/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0895	05/03/2007	1.0	Soil	<0.058 mg/kg
B84AL01-CS0896	05/03/2007	1.0	Soil	<0.058 mg/kg
B84AL01-CS0897	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0898	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0899	05/03/2007	1.0	Soil	<0.060 mg/kg
B84AL01-CS0900	05/03/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0901	05/03/2007	1.0	Soil	<0.060 mg/kg
B84AL01-CS0902	05/03/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0903	05/03/2007	1.0	Soil	<0.057 mg/kg
B84AL01-CS0904	05/03/2007	1.0	Soil	<0.060 mg/kg
B84AL01-CS0905	05/03/2007	1.0	Soil	<0.061 mg/kg
B84AL01-CS0906	05/03/2007	1.0	Soil	<0.059 mg/kg
B84AL01-CS0907	05/03/2007	1.0	Soil	<0.056 mg/kg
B84AL01-CS0908	05/03/2007	1.0	Soil	<0.054 mg/kg
B84AL01-CS0909	05/03/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0910	05/03/2007	1.0	Soil	<0.055 mg/kg

Table A-2

TABLE 1

Sample Results for PCB Site Building 84 AL#01

*PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening,  
Lennar Mare Island, Vallejo, California*

Sample Number	Sample Date	Sample Depth (feet bgs)	Sample Matrix	Total PCB Concentration <sup>a</sup>
B84AL01-CS0911	05/03/2007	1.0	Soil	<0.055 mg/kg
B84AL01-CS0912	05/03/2007	1.0	Soil	<0.054 mg/kg
B84AL01CS0913	05/10/2007	1.0	Soil	<0.055 mg/kg
B84AL01CS0914	05/10/2007	1.0	Soil	<0.057 mg/kg
B84AL01CS0915	05/10/2007	1.0	Soil	<0.049 mg/kg
B84AL01CS0916	05/10/2007	1.0	Soil	<0.055 mg/kg
B84AL01CS0917	05/10/2007	1.0	Soil	<0.26 mg/kg
B84AL01CS0918	05/10/2007	1.0	Soil	<0.29 mg/kg
B84AL01CS0919	05/10/2007	1.0	Soil	<0.054 mg/kg
B84AL01CS0920	05/10/2007	1.0	Soil	<0.057 mg/kg
B84AL01CS0921	05/10/2007	1.0	Soil	<0.23 mg/kg
B84AL01CS0922	05/10/2007	1.0	Soil	<0.050 mg/kg
B84AL01CS0923	05/10/2007	1.0	Soil	<0.30 mg/kg
B84AL01CS0924	05/10/2007	1.0	Soil	<0.058 mg/kg
B84AL01CS0925	05/10/2007	1.0	Soil	<0.25 mg/kg
B84AL01CS0926	05/10/2007	1.0	Soil	<0.29 mg/kg
B84AL01CS0927	05/10/2007	1.0	Soil	<0.26 mg/kg
B84AL01CS0928	05/10/2007	1.0	Soil	<0.29 mg/kg

<sup>a</sup>For samples collected by CH2M HILL, total PCBs are calculated by summing all of the detected Aroclors or by using a proxy value of one-half the reporting limit for historically detected Aroclors and adding this to detected Aroclors.

## Notes:

µg/wipe = micrograms per wipe  
 bgs = below ground surface  
 J = estimated concentration  
 mg/kg = milligrams per kilogram  
 PCB = polychlorinated biphenyl

Table A-2

TABLE 2

PCB Site Building 84 AL#01 Air Sample Analytical Results – May 2004

*PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening, Lennar Mare Island, Vallejo, California*

Analyte	Sample Numbers						
	84-AIR-101	84-AIR-102 (duplicate of 84-AIR-101)	84T-AIR-103 (tent)	84-AIR-104	84-AIR-105 (background)	84-AIR-106 (background)	84-AIR-107 (field blank)
Total monoCB	0.44	0.43	0.28	0.62	<0.05	<0.05	<0.05
Total diCB	8.3	8.3	4.3	11	<0.10	<0.10	<0.10
Total triCB	27	27	11	38	<0.05	<0.05	<0.05
Total tetraCB	12	12	4.8	17	<0.10	<0.10	<0.10
Total pentaCB	1.3	1.3	0.51	1.6	<0.10	<0.10	<0.10
Total hexaCB	0.26	0.24	0.08	0.30	<0.10	<0.10	<0.10
Total heptaCB	<0.10	0.02	<0.10	0.02	<0.10	<0.10	<0.10
Total octaCB	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Total nonaCB	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Total decaCB	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
<b>Total PCBs</b>	<b>49</b>	<b>49</b>	<b>21</b>	<b>69</b>	<b>&lt;0.30</b>	<b>&lt;0.30</b>	<b>&lt;0.30</b>

## Notes:

Air sample results are presented as ng/m<sup>3</sup>.Ambient air PRG = 3.4 ng/m<sup>3</sup> (United States Environmental Protection Agency Region 9 2004 value for unspeciated PCB mixture, high risk).  
Calculated risk-based screening level (commercial/industrial land use scenario) = 7.2 ng/m<sup>3</sup>.

CB = chlorinated biphenyl

ng/m<sup>3</sup> = nanograms per cubic meter

PCB = polychlorinated biphenyl

PRG = preliminary remediation goal

Table A-3

**TABLE 3**

**PCB Site Building 84 AL#01 Air Sample Analytical Results – June 2005**  
*PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air*  
*Polychlorinated Biphenyl Screening, Lennar Mare Island, Vallejo, California*

<b>Analyte</b>	<b>84-AIR-202</b>	<b>84-AIR-208</b>
Total monoCB	0.68	0.69
Total diCB	17	17
Total triCB	61	58
Total tetraCB	26	22
Total pentaCB	2.6	2.3
Total hexaCB	0.65	0.54
Total heptaCB	0.13	0.08
Total octaCB	<0.10	<0.10
Total nonaCB	<0.10	<0.10
Total decaCB	<0.10	<0.10
<b>Total PCBs</b>	<b>110</b>	<b>100</b>

**Notes:**

Air sample results are presented as ng/m<sup>3</sup>.

Ambient air PRG = 3.4 ng/m<sup>3</sup> (United States Environmental Protection Agency Region 9 2004 value for unspeciated PCB mixture, high risk).  
Calculated risk-based screening level (commercial/industrial land use scenario) = 7.2 ng/m<sup>3</sup>.

CB = chlorinated biphenyl

ng/m<sup>3</sup> = nanograms per cubic meter

PCB = polychlorinated biphenyl

PRG = preliminary remediation goal

**Table A-4**

TABLE 4

PCB Site Building 84 AL#01 Air Sample Analytical Results – December 2006

*PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening, Lennar Mare Island, Vallejo, California*

Analyte	B84717A-AIR	B84A717	B84A718	B84A719
Total monoCB	0.60	0.50	0.71	0.54
Total diCB	26	19	20	17
Total triCB	73	53	60	50
Total tetraCB	29	19	23	20
Total pentaCB	9.2	4.1	4.9	3.6
Total hexaCB	1.8	0.83	0.92	0.68
Total heptaCB	0.14	0.05	0.11	0.07
Total octaCB <sup>a</sup>	<0.13 or <0.25	<0.13 or <0.25	<0.13 or <0.25	<0.13 or <0.25
Total nonaCB	<0.13	<0.13	<0.13	<0.13
Total decaCB	NA	NA	NA	NA
<b>Total PCB</b>	<b>140</b>	<b>96</b>	<b>110</b>	<b>91</b>

<sup>a</sup>Depending on the congener used, total octaCB reporting limit was 0.13 or 0.25.

## Notes:

Air sample results are presented as ng/m<sup>3</sup>.

Ambient air PRG (residential land use scenario) = 3.4 ng/m<sup>3</sup> (United States Environmental Protection Agency Region 9 2004 value for unspeciated PCB mixture, high risk). Calculated risk-based screening level (commercial/industrial land use scenario) = 7.2 ng/m<sup>3</sup>.

CB = chlorinated biphenyl

NA = not analyzed

ng/m<sup>3</sup> = nanograms per cubic meter

PCB = polychlorinated biphenyl

PRG = preliminary remediation goal

Table A-5

TABLE 5

PCB Site Building 84 AL#01 Air Sample Analytical Results – June 2007

PCB Site Building 84 AL#01 Cleanup Activities and Indoor Air Polychlorinated Biphenyl Screening, Lennar Mare Island, Vallejo, California

Analyte	B84AIR0817-A	B84AIR0818-A	B84AIR0818-AFD	B84AIR0819-A
Total monoCB	0.36	0.37	0.32	0.37
Total diCB	27	26	24	25
Total triCB	70	69	69	61
Total tetraCB	33	34	31	32
Total pentaCB	4.4	4.1	5.1	3.9
Total hexaCB	0.85	0.90	1.1	0.87
Total heptaCB	0.11	0.15	0.12	0.11
Total octaCB <sup>a</sup>	<0.13 or <0.25	<0.13 or <0.25	<0.13 or <0.25	<0.13 or <0.25
Total nonaCB	<0.13	<0.13	<0.13	<0.13
Total decaCB	<0.13	<0.13	<0.13	<0.13
Total PCBs	130	130	130	120

<sup>a</sup>Depending on the congener used, total octaCB reporting limit was 0.13 or 0.25.

## Notes:

Air sample results are presented as ng/m<sup>3</sup>.

Ambient air PRG (residential land use scenario) = 3.4 ng/m<sup>3</sup> (United States Environmental Protection Agency Region IX 2004 value for unspeciated PCB mixture, high risk). Calculated risk-based screening level (commercial/industrial land use scenario) = 7.2 ng/m<sup>3</sup>.

CB = chlorinated biphenyl

ng/m<sup>3</sup> = nanograms per cubic meter

PCB = polychlorinated biphenyl

PRG = preliminary remediation goal

Table A-6

**ATTACHMENT B**  
**LABORATORY REPORT (2009 Sampling)**





**Curtis & Tompkins, Ltd.**

Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 209794**  
**ANALYTICAL REPORT**

Remedy Engineering  
1567 Yuba St  
Redding, CA 96001

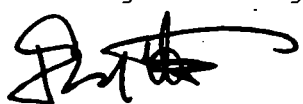
Project : 101204  
Location : B84 Mezzanine  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
B84MEZZRE0101	209794-001
B84MEZZRE0102	209794-002
B84MEZZRE0103	209794-003
B84MEZZRE0104	209794-004
B84MEZZRE0105	209794-005
B84MEZZRE0106	209794-006
B84MEZZRE0107	209794-007
B84MEZZRE0108	209794-008
B84MEZZRE0108D	209794-009
B84MEZZRE0109	209794-010
B84MEZZRE0110	209794-011
B84MEZZRE0111	209794-012
B84MEZZRE0112	209794-013
B84MEZZRE0113	209794-014
B84MEZZRE0114	209794-015
B84MEZZRE0115	209794-016
B84MEZZRE0116	209794-017
B84MEZZRE0120	209794-018
B84MEZZRE0117	209794-019
B84MEZZRE0118	209794-020
B84MEZZRE0119	209794-021
B84MEZZRE0119D	209794-022

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:   
Project Manager

Date: 02/13/2009

Signature:   
Senior Program Manager

Date: 02/18/2009

NELAP # 01107CA

### CASE NARRATIVE

Laboratory number: 209794  
Client: Remedy Engeneering  
Project: 101204  
Location: B84 Mezzanine  
Request Date: 02/05/09  
Samples Received: 02/05/09

This data package contains sample and QC results for twenty two concrete samples, requested for the above referenced project on 02/05/09. The samples were received cold and intact.

#### PCBs (EPA 8082):

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. Low surrogate recoveries were observed for decachlorobiphenyl in the MSD for batch 147725 and the method blank/BS/BSD for batch 147765; the corresponding TCMX surrogate recoveries were within limits. No other analytical problems were encountered.

**2323 Fifth Street  
Berkeley, CA 94710  
(510) 486-0900 Phone  
(510) 486-0532 Fax**

Page 2 of 2

**C & T LOGIN #:**

**Sampler:****Project No.:****Report To:**

**Project Name:**

**Company:****Project P.O.:****Telephone:**

### Turnaround Time:

**Fax:**[illegible]

DATE / TIME

3 of 20

2323 Fifth Street  
Berkeley, CA 94710  
(510) 486-0900 Phone  
(510) 486-0532 Fax

Page 1 of 2**C & T LOGIN #:****Sampler:****Project No.:****Report To:**

**Project Name:**

**Company:**

**Project P.O.:****Telephone:**

**Turnaround Time:**

**Fax:**

Lab No.	Sample ID.	Sampling Date Time	Matrix				# of Containers	Preservative				
			Soil	Water	Waste	Concrete		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE	None
1	B89ME77RF0101	09:57				X	1					X
2	" 0102	10:08				X	1					X
3	" 0103	10:20				X	1					X
4	" 0104	10:25				X	1					X
5	" 0105	10:30				X	1					X
6	" 0106	10:45				X	1					X
7	" 0107	10:50				X	1					X
8	" 0108	11:00				X	1					X
9	" 0108D	11:02				X	1					X
10	" 0109	11:05				X	1					X
11	" 0110	11:10				X	1					X
12	" 0111	11:17				X	1					X
13	" 0112	11:20				X	1					X

**Notes:**

## SAMPLE RECEIPT

☐ Intact    ☐ Cold  
☐ On Ice    ☐ Ambient

**Preservative Correct?**

☐ Yes ☐ No ☐ N/A**RELINQUISHED BY:**

Joshua Woodward

2/5/09 15:00  
DATE / TIME

DATE / TIME

DATE / TIME

RECEIVED BY:

DATE / TIME

DATE / TIME

DATE / TIME

**SIGNATURE**

4 of 20

## COOLER RECEIPT CHECKLIST



Curtis &amp; Tompkins, Ltd.

Login # 209794 Date Received 2/5/09 Number of coolers 1  
 Client Remedy engineering Project B84 Mezzanine  
 Date Opened 2/5/09 By (print) Phuong (sign) [Signature]  
 Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)  
 Shipping info \_\_\_\_\_

2A. Were custody seals present? ... ☐ YES (circle) on cooler on samples ☒ NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? YES NO (N/A)

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None  
☐ Cloth material ☒ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) \_\_\_\_\_

☒ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES (NO)

If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are samples in the appropriate containers for indicated tests? YES NO

11. Are sample labels present, in good condition and complete? YES NO

12. Do the sample labels agree with custody papers? YES NO

13. Was sufficient amount of sample sent for tests requested? YES NO

14. Are the samples appropriately preserved? YES NO (N/A)

15. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)

16. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

COC DOES NOT HAVE SAMPLE DATE  
Log in SAMPLE ID label date

### Polychlorinated Biphenyls (PCBs)

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID:	B84MEZZRE0101	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-001	Analyzed:	02/10/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	25.00		

Analyte	Result	RL
Aroclor-1016	ND	210
Aroclor-1221	ND	410
Aroclor-1232	ND	210
Aroclor-1242	12,000	210
Aroclor-1248	ND	210
Aroclor-1254	ND	210
Aroclor-1260	370	210

Surrogate	REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID:	B84MEZZRE0102	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-002	Analyzed:	02/10/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	25.00		

Analyte	Result	RL
Aroclor-1016	ND	210
Aroclor-1221	ND	420
Aroclor-1232	ND	210
Aroclor-1242	16,000	210
Aroclor-1248	ND	210
Aroclor-1254	ND	210
Aroclor-1260	400	210

Surrogate	REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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### Polychlorinated Biphenyls (PCBs)

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID: B84MEZZRE0103 Batch#: 147765  
 Type: SAMPLE Prepared: 02/09/09  
 Lab ID: 209794-003 Analyzed: 02/10/09  
 Matrix: Miscell. Cleanup Method: EPA 3665A  
 Diln Fac: 50.00

Analyte	Result	RL
Aroclor-1016	ND	420
Aroclor-1221	ND	830
Aroclor-1232	ND	420
Aroclor-1242	22,000	420
Aroclor-1248	ND	420
Aroclor-1254	ND	420
Aroclor-1260	480	420

Surrogate	REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID: B84MEZZRE0104 Batch#: 147765  
 Type: SAMPLE Prepared: 02/09/09  
 Lab ID: 209794-004 Analyzed: 02/11/09  
 Matrix: Miscell. Cleanup Method: EPA 3665A  
 Diln Fac: 20.00

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	8,200	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	420	170

Surrogate	REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

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2.0





Curtis &amp; Tompkins, Ltd.

**Polychlorinated Biphenyls (PCBs)**

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID: B84MEZZRE0105  
Type: SAMPLE  
Lab ID: 209794-005  
Matrix: Miscell.  
Diln Fac: 20.00

Batch#: 147765  
Prepared: 02/09/09  
Analyzed: 02/11/09  
Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	11,000	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	460	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID: B84MEZZRE0106  
Type: SAMPLE  
Lab ID: 209794-006  
Matrix: Miscell.  
Diln Fac: 20.00

Batch#: 147725  
Prepared: 02/08/09  
Analyzed: 02/09/09  
Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	130
Aroclor-1221	ND	270
Aroclor-1232	ND	130
Aroclor-1242	6,600	130
Aroclor-1248	ND	130
Aroclor-1254	ND	130
Aroclor-1260	200	130

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

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2.0

### Polychlorinated Biphenyls (PCBs)

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID: B84MEZZRE0107 Batch#: 147765  
 Type: SAMPLE Prepared: 02/09/09  
 Lab ID: 209794-007 Analyzed: 02/11/09  
 Matrix: Miscell. Cleanup Method: EPA 3665A  
 Diln Fac: 10.00

Analyte	Result	RL
Aroclor-1016	ND	83
Aroclor-1221	ND	170
Aroclor-1232	ND	83
Aroclor-1242	5,900	83
Aroclor-1248	ND	83
Aroclor-1254	ND	83
Aroclor-1260	ND	83

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID: B84MEZZRE0108 Batch#: 147765  
 Type: SAMPLE Prepared: 02/09/09  
 Lab ID: 209794-008 Analyzed: 02/11/09  
 Matrix: Miscell. Cleanup Method: EPA 3665A  
 Diln Fac: 20.00

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	9,700	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	310	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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### Polychlorinated Biphenyls (PCBs)

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID:	B84MEZZRE0108D	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-009	Analyzed:	02/11/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	10.00		

Analyte	Result	RL
Aroclor-1016	ND	83
Aroclor-1221	ND	170
Aroclor-1232	ND	83
Aroclor-1242	5,800	83
Aroclor-1248	ND	83
Aroclor-1254	ND	83
Aroclor-1260	190	83

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID:	B84MEZZRE0109	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-010	Analyzed:	02/11/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	20.00		

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	8,000	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	260	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

**Polychlorinated Biphenyls (PCBs)**

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID:	B84MEZZRE0110	Batch#:	147725
Type:	SAMPLE	Prepared:	02/08/09
Lab ID:	209794-011	Analyzed:	02/09/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	20.00		

Analyte	Result	RL
Aroclor-1016	ND	130
Aroclor-1221	ND	260
Aroclor-1232	ND	130
Aroclor-1242	8,300	130
Aroclor-1248	ND	130
Aroclor-1254	ND	130
Aroclor-1260	ND	130

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID:	B84MEZZRE0111	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-012	Analyzed:	02/12/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	20.00		

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	9,600	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	290	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative  
DO= Diluted Out  
ND= Not Detected  
RL= Reporting Limit  
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### Polychlorinated Biphenyls (PCBs)

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID:	B84MEZZRE0112	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-013	Analyzed:	02/12/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	20.00		

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	8,400	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	180	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID:	B84MEZZRE0113	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-014	Analyzed:	02/12/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	20.00		

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	7,700	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	260	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative  
DO= Diluted Out  
ND= Not Detected  
RL= Reporting Limit  
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Curtis &amp; Tompkins, Ltd.

**Polychlorinated Biphenyls (PCBs)**

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID: B84MEZZRE0114  
Type: SAMPLE  
Lab ID: 209794-015  
Matrix: Miscell.  
Diln Fac: 20.00

Batch#: 147765  
Prepared: 02/09/09  
Analyzed: 02/12/09  
Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	9,200	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	200	170

Surrogate	REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID: B84MEZZRE0115  
Type: SAMPLE  
Lab ID: 209794-016  
Matrix: Miscell.  
Diln Fac: 20.00

Batch#: 147765  
Prepared: 02/09/09  
Analyzed: 02/12/09  
Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	11,000	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	260	170

Surrogate	REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative  
DO= Diluted Out  
ND= Not Detected  
RL= Reporting Limit  
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Curtis &amp; Tompkins, Ltd.

**Polychlorinated Biphenyls (PCBs)**

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID: B84MEZZRE0116  
Type: SAMPLE  
Lab ID: 209794-017  
Matrix: Miscell.  
Diln Fac: 20.00

Batch#: 147765  
Prepared: 02/09/09  
Analyzed: 02/12/09  
Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	9,300	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	ND	170

Surrogate	\$REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID: B84MEZZRE0120  
Type: SAMPLE  
Lab ID: 209794-018  
Matrix: Miscell.  
Diln Fac: 10.00

Batch#: 147765  
Prepared: 02/09/09  
Analyzed: 02/12/09  
Cleanup Method: EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	83
Aroclor-1221	ND	170
Aroclor-1232	ND	83
Aroclor-1242	5,800	83
Aroclor-1248	ND	83
Aroclor-1254	ND	83
Aroclor-1260	200	83

Surrogate	\$REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

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### Polychlorinated Biphenyls (PCBs)

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID: B84MEZZRE0117 Batch#: 147765  
 Type: SAMPLE Prepared: 02/09/09  
 Lab ID: 209794-019 Analyzed: 02/12/09  
 Matrix: Miscell. Cleanup Method: EPA 3665A  
 Diln Fac: 20.00

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	12,000	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	190	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID: B84MEZZRE0118 Batch#: 147765  
 Type: SAMPLE Prepared: 02/09/09  
 Lab ID: 209794-020 Analyzed: 02/10/09  
 Matrix: Miscell. Cleanup Method: EPA 3665A  
 Diln Fac: 20.00

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	10,000	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	180	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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Curtis &amp; Tompkins, Ltd.

**Polychlorinated Biphenyls (PCBs)**

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Field ID:	B84MEZZRE0119	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-021	Analyzed:	02/10/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	20.00		

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	8,300	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	ND	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

Field ID:	B84MEZZRE0119D	Batch#:	147765
Type:	SAMPLE	Prepared:	02/09/09
Lab ID:	209794-022	Analyzed:	02/10/09
Matrix:	Miscell.	Cleanup Method:	EPA 3665A
Diln Fac:	20.00		

Analyte	Result	RL
Aroclor-1016	ND	170
Aroclor-1221	ND	330
Aroclor-1232	ND	170
Aroclor-1242	11,000	170
Aroclor-1248	ND	170
Aroclor-1254	ND	170
Aroclor-1260	210	170

Surrogate	%REC	Limits
TCMX	DO	68-139
Decachlorobiphenyl	DO	52-147

\*= Value outside of QC limits; see narrative

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

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Curtis &amp; Tompkins, Ltd.

**Polychlorinated Biphenyls (PCBs)**

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Units:	ug/Kg	Sampled:	02/05/09
Basis:	as received	Received:	02/05/09

Type:	BLANK	Batch#:	147725
Lab ID:	QC482549	Prepared:	02/08/09
Matrix:	Soil	Analyzed:	02/08/09
Diln Fac:	1.000	Cleanup Method:	EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
TCMX	102	68-139
Decachlorobiphenyl	59	52-147

Type:	BLANK	Batch#:	147765
Lab ID:	QC482712	Prepared:	02/09/09
Matrix:	Miscell.	Analyzed:	02/10/09
Diln Fac:	1.000	Cleanup Method:	EPA 3665A

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
TCMX	73	68-139
Decachlorobiphenyl	47 *	52-147

\*= Value outside of QC limits; see narrative

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

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Curtis & Tompkins, Ltd.

# Batch QC Report

## Polychlorinated Biphenyls (PCBs)

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC482553	Batch#:	147725
Matrix:	Soil	Prepared:	02/08/09
Units:	ug/Kg	Analyzed:	02/08/09
Basis:	as received		

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	165.8	168.1	101	73-139
Aroclor-1260	165.8	164.8	99	76-143

Surrogate	%REC	Limits
TCMX	105	68-139
Decachlorobiphenyl	56	52-147

# Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Field ID:	ZZZZZZZZZZ	Batch#:	147725
MSS Lab ID:	209766-005	Sampled:	02/03/09
Matrix:	Soil	Received:	02/05/09
Units:	ug/Kg	Prepared:	02/08/09
Basis:	as received	Analyzed:	02/09/09
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3665A  
 Lab ID: QC482554

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<1.543	166.5	162.3	97	66-146
Aroclor-1260	<1.835	166.5	160.3	96	52-142

Surrogate	%REC	Limits
TCMX	92	68-139
Decachlorobiphenyl	53	52-147

Type: MSD Cleanup Method: EPA 3665A  
 Lab ID: QC482555

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	165.8	156.2	94	66-146	3	28
Aroclor-1260	165.8	156.2	94	52-142	2	28

Surrogate	%REC	Limits
TCMX	88	68-139
Decachlorobiphenyl	49 *	52-147

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

**Polychlorinated Biphenyls (PCBs)**

Lab #:	209794	Location:	B84 Mezzanine
Client:	Remedy Engineering	Prep:	EPA 3550B
Project#:	101204	Analysis:	EPA 8082
Matrix:	Miscell.	Batch#:	147765
Units:	ug/Kg	Prepared:	02/09/09
Basis:	as received	Analyzed:	02/10/09
Diln Fac:	1.000		

Type: BS  
Lab ID: QC482713

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	166.5	131.4	79	73-139
Aroclor-1260	166.5	149.9	90	76-143

Surrogate	%REC	Limits
TCMX	81	68-139
Decachlorobiphenyl	48 *	52-147

Type: BSD  
Lab ID: QC482714

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	166.8	135.0	81	73-139	2	20
Aroclor-1260	166.8	142.7	86	76-143	5	22

Surrogate	%REC	Limits
TCMX	80	68-139
Decachlorobiphenyl	44 *	52-147

\*= Value outside of QC limits; see narrative  
RPD= Relative Percent Difference

**ATTACHMENT C**  
**CERTIFICATION**



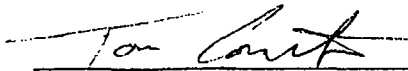
## Certification

All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the polychlorinated biphenyl (PCB) contamination at Building 84 AL#01 and the Mezzanine area are on file both at the Remedy Engineering, Inc. office located at 1567 Yuba Street in Redding, California and the CH2M HILL Office located at 155 Grand Avenue, Suite 1000, Oakland, California. These files are available for USEPA inspection.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.



Neal Siler, Lennar Mare Island, LLC (the owner of the property where the cleanup site is located)



Tom Corontzos, P.E./Remedy Engineering, Inc. (the party conducting the cleanup)